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ABSTRACT

This document describes a software program, CREATE, which was developed at Drexel University to guide students in creating English compositions. A second program, ReCREATE, guides students in reading their finished papers and making global revisions. CREATE asks 20 questions that a teacher might ask a student in a pre-writing conference. Unlike the teacher, however, the program never tires of the repetitive interview: it offers encouraging words, urges the student to expand details while limiting the topic, and then provides a printed transcript which can be used to develop an outline if desired. ReCREATE asks 10 questions that are often overlooked because surface revision and cosmetic "prettiness" are so easily achieved with a computer. Questions in both programs can be tailored to the particular writing assignments. In addition to describing the benefits of these computer programs, the paper also discusses limitations of composition programs, e.g., the computer does not know if the student has responded intelligently. (THC)

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CREATING AND RECREATING

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Creating and Recreating[1]

Computers can aid beginning writers (i.e. students) by focusing their attention on the process of composition. In particular, software programs for prewriting and global revision can teach students the patterns of thinking that good writers use without prompting. Following Hugh Burns' model invention program, I have developed a program called CREATE to guide students in creating their papers.[2] With the aid of a junior computer science major, I have also developed a program called ReCREATE to guide students to read their finished papers to make global revisions.

CREATE asks twenty questions that I might ask a student in a pre-writing conference. Unlike the teacher, the program never tires of the repetitive interview. It calls the student by name, offers encouraging words, urges him to expand his details while limiting his topic, and then gives him a printed transcript, which he can use to develop an outline if he likes. The program can vary for particular writing assignments; for example in technical writing, it focuses a lot of attention on audience. A typical question which incorporates the students' name and topic asks: "Well, Ruth, what do you think your audience already knows about coal liquefaction?"

ReCREATE asks ten questions that are often overlooked because surface revision, and cosmetic "prettiness" are so easily achieved with a computer. The danger is that the student, having made changes at the word and sentence level, will neglect to read critically the entire paper.

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[1] Paper published in College, Composition and Communication, Vol. 34, No 3, October 1983, pp 355-358.

[2] Hugh Burns, "Stimulating Invention in English Composition through Computer-Assisted Instruction." Ph.D. thesis, University of Texas at Austin, 1979, ED. 188245. See also the April 1983 issue of Pipeline which is devoted to Computers in Composition.

ReCREATE circumvents this danger by asking the student to answer questions about the structure and organization from memory and then to compare her memory of what she has done with the actual paper. Again the questions can be tailored to the assignment. To continue our example in technical writing, the program asks "Let's think about audience now, Ruth. How have you met the needs of the multiple audiences, (co-workers, supervisors, upper management) who will have to act on your information about coal liquefaction?" After the student answers, the program offers an encouraging "Let's hope they all react favorably."

That response leads me to a discussion of the limitations of composition programs. The computer does not know if the student has responded intelligently. Burns precedes his questions with the reminder "Garbage in, garbage out." Do students type garbage answers? A few may, but then a few always forget to show up for their conference time. My experience is that most students treat the computer as a friend. They are comfortable talking to it and awed by its responses. They may argue with a teacher that "everyone knows" what that fuzzy word means but they do not argue with the computer, which responds to a short answer with "Tell me more." The computer can read the length of the answer, though not the content and if the programmer has indicated that long answers are preferred, it can prompt the student to elaborate.

Obviously, the benefits of prewriting and revising are well recognized by composition teachers. Using the computer makes the process of compositon more accessible to students. But if you want to develop programs or use existing ones, you need to recognize the dangers. The computer does not replace the teacher's guidance in making informed decisions. How does the student know what details are appropriate, how to analyze the needs of her audience, or whatever cognitive skills are part of the course's objectives? You must still teach these. And if you have adequate computer facilities, you can use them for exercises to develop the skills, but you should not make the students dependent on the computer.

"Skills" is a key word. The computer focuses student attention on a process that should become habitual for any writing in any setting; the computer is not essential to the process. My feisty officemate astutely

noted that I could give my students mimeographed sheets with the questions for CREATE and ReCREATE and still accomplish my goal, for a lot less money. Yes, the mimeographed sheet could help to develop writing skills. Do students learn from it as well as from the computer? No. Writing on the computer is enticing; writing on a sheet of paper is not. When CREATE was intially installed, we had forgotten to allow for hardcopies of the student responses. As soon as two students ran the program and informed me of the oversight, I corrected it, but assured the first two that they had derived the benefits of prewriting much as if they had had a conference with me in my office without getting a transcript. "We're going to run it again anyway, " they both exclaimed, "it's fun!" I have never had to give a student a second mimeographed sheet because he thought it was fun. Several studies, reported in Technological Horizons in Education support the fact that students learn more quickly and more willingly with computers.[3] Just listening to students' comments in our computer lab indicates why. Computers are "fun", since you "play" "games" or solve "puzzles" with them. People talk to their computers, but not to their paper and pen. Practicing penmanship is a bore, but practicing repeated joystick motions on an electronic game is exciting. Somehow, the computer makes the acquisition of a skill challenging and rewarding. Once that skill is learned, the computer may lose its ability to enchant, but by then the student will prewrite and revise as a habit.

The guidelines I suggest for using software like CREATE and ReCREATE apply to the choice of computer, the construction of the programs, and the pedagogy of implementing them. Whether a mainframe or microcomputers, the computer must be easy for the students to use. They should be able to work when they feel creative and they should not be hampered by complex directions on how to run the computer or the programs. Writing is a "hassle" in their jargon; add more hassle and you decrease the chance of changing their writing process. Any information or directions must be simply worded and simple to execute. For the student

[3] G. Kearsley, B. Hunter and R. J. Seidel, "Two Decades of Computer Based Instruction Projects: What Have We Learned?" T.H.E. Journal, January and February, 1983.

to benefit from using the computer, he should be free to use it at a convenient time in a comfortable setting. When we write we all have our foibles; William Styron can only compose on yellow legal pads with No. 2 pencils, for example. So to tell students "Now, you will run the invention program and begin writing your paper" could be deadening instead of inspiring if we neglect to consider their preparation and environment. The necessity of making the computer convenient may determine the choice of mainframe or personal computer.

It can be equally deadening to confuse invention with outlining and insist in an invention program that students list 3 supporting arguments for their key points when we want them to pre-write in order to determine what their key points should be. Prewriting is searching and exploring, whereas outlining is limiting. A good pre-writing program should address students in a friendly tone as it guides them through simply worded, open-ended questions. It should ask only one question at a time to avoid confusion, i.e. "Who is your audience?" and then "What does your audience (preferably filling in this space with the answer just given) already know?" It should allow them to skip questions they deem irrelevant or unanswerable, and it should be easy for them to end the program when they have generated enough ideas to start the writing process. Since we want to teach them how to generate ideas, we can suggest that they make comparisons or analogies, and allow space for free writing if they do get inspired. CREATE, for example, ends with the suggestion "Now that you've answered all the questions maybe you'd like to just write anything that comes to mind, start your paper, or add comments to yourself regarding your paper." If the student chooses, he can go ahead and type freely. The printout of his dialogue with the computer can be a valuable blueprint.

A good program addressing global revision should recall the prewriting dialogue, at least to the student's mind if not acutally on the computer. Again its tone should be friendly, its questions limited to one at a time, simply worded. It should offer the option of skipping questions and of leaving the program quickly, perhaps because the student wants to revise a flaw she suddenly perceives in the paper. If we want to re-inforce our teaching, we can include questions like"What is your thesis?" with a prompt that briefly explains "thesis". Obviously the program should end

with a suggestion that the student now look at the paper she has written to consider possible revisions to organization and content.

Using the computer and invention programs also requires sound pedagogy. We want students to understand the value of the process of composing, so teaching that in class provides a rationale for the computer exercise. It also provides an emergency plan if the computer is down, since it is the process, not the computer that we value. We can assure our students of a skill that will benefit them on any writng they ever have to do, and get their eager participation if they can have fun learning it on a computer. It may be useful to require them to submit the hard copy of their prewriting program, or to mail it electronically if we want to add comments but it would hinder their responses if it were graded. Similarly, a global revision program shold not be graded if we want them to assess their own work honestly. Prewriting and revising are the writer's strategies for self-improvement. As teachers, we may want to develop those strategies in our students but it is unfair to expect them to fit neat patterns when in reality they represent what we would see if we looked at the crumbled wads of paper in a wastebasket in the dorm. Since I collect a student's portfolio including all rough work for the entire term, I ask my students to include hardcopies of CREATE and ReCREATE, but otherwise I do not collect or grade them. Actually, I only assign them for one of six writing assignments. Once I have introduced the process of composition, I tell students how the programs can help them and ask them to run them for one assignment. After that, I count on the programs' effectiveness for improving the quality of the paper to draw the students back on subsequent assignments. Obviously, students who see the value of the process are not going to waste their time typing garbage either.

Creating and recreating a paper on the computer offers exciting possiblities for students to learn the process of composition and for the teacher to provide the guidance of a good conference - if we keep a few commonsense guidelines in mind.